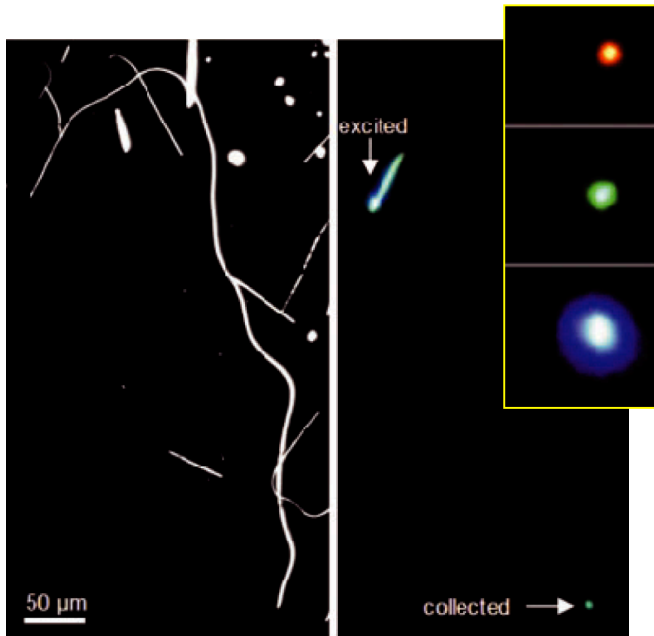


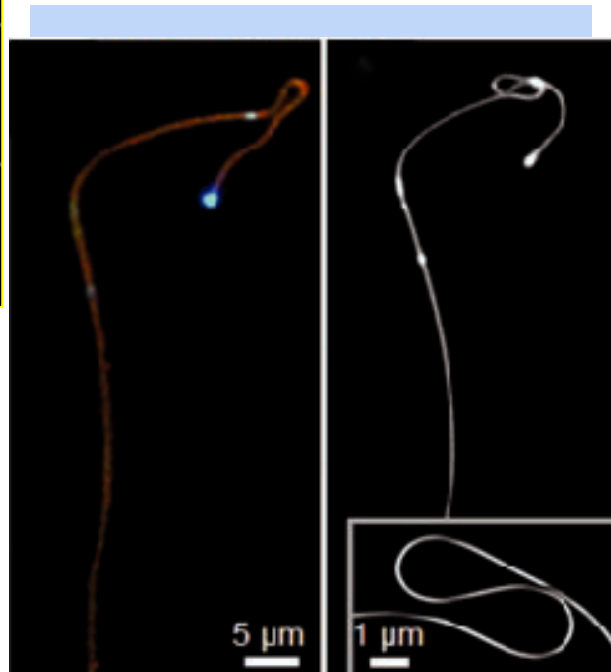


A Guiding Light at the Nanoscale

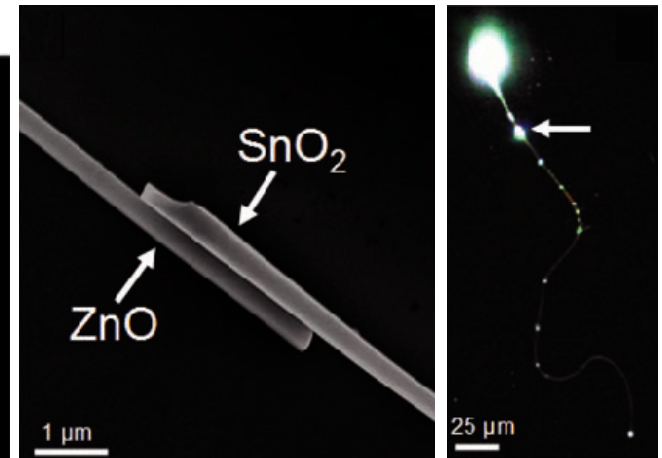
Nanoribbons Used to Steer Light



Optical waveguiding in a 715-micron long SnO_2 nanoribbon, 350 nm wide by 245 nm thick (left). Excitation point (top right) and emission point (bottom right), demonstrating effective guiding of light along the ribbon (right). Inset shows image of the collection end of another ribbon demonstrating guiding of red, green, and blue light.



Guiding around curves. Blue emission from a nanoribbon with a sharp hairpin curve 10 microns from the emission point (left). Total light emission in a ribbon (right) with a tight S turn (inset). Light is guided around both 1 micron radii curves. (Note small amount of leakage at one of the curves).



Nanoribbon heterojunction. Overlapping zinc oxide and tin oxide nanoribbons (left) located at the point marked by the arrow at right. When the lower ribbon is excited by a laser at its end, strong emission from the other ribbon (top) is observed, demonstrating the efficient optical coupling.